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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/718,803	11/22/2000	Paul O. Sheppard	99-62	2602

7590

09/06/2005

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EXAMINER

PARK, HANKYEL

ART UNIT

PAPER NUMBER

1648

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/718,803

Applicant(s)

SHEPPARD ET AL.

Examiner

Hankyel T. Park

Art Unit

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-6 and 8-10 is/are allowed.
- 6) ☒ Claim(s) 1 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Pending Claims

Claims 1-10 are pending in this application. Applicants' request for continued examination and submission of an information disclosure statement, filed on October 28, 2003, are acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/42840, cited in the information disclosure statement by the applicants (B4).

In claims 1 and 7, applicants claim a method of forming a reversible peptide-receptor complex comprising an immobilized receptor, which binds a peptide comprising

residues 24 to 37 of SEQ ID NO: 2 and a method of purifying cells with the receptors using the immobilized peptide, respectively.

First of all, B4 reference teaches the same residues 24 to 37 of SEQ ID NO: 2 (claim 9). The reference does not teach specifically a method of forming a reversible peptide-receptor complex comprising an immobilized receptor, which binds a peptide comprising residues 24 to 37 of SEQ ID NO: 2.

It would have been *prima facie* obvious, however, for one of ordinary skill in the art at the time the invention was made to provide a method, as claimed in claim 1, of forming a reversible peptide-receptor complex comprising an immobilized receptor, which binds a peptide comprising residues 24 to 37 of SEQ ID NO: 2 from the B4 reference alone. Since the reference provides a motivation to use a receptor for purification of its ligand (page 38, lines 19-35, ligand-binding polypeptide being the receptor, the polypeptide is immobilized on a solid support), the one of ordinary skill would have been motivated to use a receptor that binds a peptide comprising residues 24 to 37 of SEQ ID NO: 2, which is already isolated (claim 9) and characterized (Examples 5 and 7).

The one of ordinary skill would have a likelihood of success in obtaining such a method because the method of immobilizing a polypeptide on a solid support, such as beads of agarose, cross-linked agarose, glass, cellulosic resins, and contacting the polypeptide (receptor) with a peptide (ligand) are well known in the art.

Second of all, B4 reference provides a motivation to immobilize peptides of the invention to isolate receptors on a membrane (page 42, lines 11-24). Again it would

have been *prima facie* obvious for one of ordinary skill in the art to use specific residues 24 to 37 of SEQ ID NO: 2 since it is isolated and characterized and to use it to isolate receptors on a membrane as motivated by the same reference. A method of purifying cells comprising receptors that bind its ligand immobilized on a substrate is well known in the art. Therefore, the one of ordinary skill in the art would have a likelihood of success in obtaining such a method of purifying the cell.

Conclusion


Claims 2-6 and 8-10 are deemed to distinguish over the prior art.

Claims 1 and 7 are not allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hankyel T. Park whose telephone number is 571-272-0907. The examiner can normally be reached on 7:30 a.m. -4:00 p.m. Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Housel can be reached at 571-272-0902. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


HANKYEL T. PARK, PH.D. 5.10.05
PRIMARY EXAMINER